

In the Claims:

The currently pending claims are as follows:

1-15. (canceled)

16. (previously presented) A method for determining the mass of a motor vehicle, comprising the steps of:

determining a vehicle acceleration from at least a time differential of vehicle speed, a slope descending angle and a rolling resistance coefficient;

determining vehicle forces, wherein the vehicle forces include

a driving force of a vehicle drive unit,

resistance forces resulting from rotational forces and air resistance,

and

a braking force;

dividing the vehicle forces by the vehicle acceleration to obtain a vehicle mass value,

obtaining a plurality of vehicle mass values from a plurality of driving situations;

storing each of the plurality of vehicle mass values, and

determining a collective mass value from the stored plurality of vehicle mass values, wherein the plurality of vehicle mass values obtained from the plurality of driving situations are weighted differently.

17-18. (canceled)

19. (previously presented) The method of claim 16, wherein  
in the step of determining vehicle acceleration, the slope descending angle  
determination includes determination of a roadway inclination from a  
relationship between an acceleration in the roadway direction determined by at  
least one longitudinal acceleration sensor installed in the vehicle, and a  
component of the acceleration in the roadway direction normal to a gravity  
direction.

20. (original) The method of claim 19, wherein  
the component of the acceleration in the roadway direction normal to a  
gravity direction is determined from a satellite-based navigation system.

21-22. (canceled)

23. (previously presented) The method of claim 19, wherein  
a vehicle body pitch angle is considered in determining the slope  
descending angle.

24. (original) The method of claim 16, wherein  
the braking force is estimated from operating data from a brake system  
installed in the vehicle.

25. (original) The method pursuant to claim 24, wherein  
the braking force is determined from a braking pressure and an estimated  
coefficient of friction between a brake lining and a brake disc.

26. (original) The method of claim 24, wherein  
the operating data from the braking system is obtained when braking  
without slippage between vehicle tires and the roadway.

27. (original) The method of claim 25, wherein  
the operating data from the braking system is obtained when braking  
without slippage between vehicle tires and the roadway.

28. (original) The method of claim 16, wherein  
the braking force is determined from an evaluation of a path traveled  
during a braking operation.

29. (original) The method of claim 19, wherein  
at least one of the roadway inclination and the path traveled during a  
braking operation is determined from a vehicle navigational system.

30. (previously presented) The method of claim 16, wherein  
detectable offsets in at least one of the vehicle acceleration, driving force of  
a vehicle drive unit, resistance forces resulting from rotational forces, air  
resistance, rolling resistance and the slope descending angle are corrected prior  
to obtaining the vehicle mass value.

31. (original) The method of claim 16, wherein  
plausibility controls are provided.